

Clinical Evaluation of Plaque Removal of New BURST™ Sonic Power Toothbrush

A single-use, 2-period, cross-over clinical study evaluated the efficacy of new BURST™ Pro Sonic Toothbrush (in the “WHITENING MODE”) compared to an American Dental Association (ADA) accepted manual soft toothbrush. A crossover is a type of clinical trial in which all participants receive the same two treatment products, but in a random order at the two study visits. 32 volunteers, 18 to 65 years of age, participated in the study and brushed their teeth for two minutes with a fluoride toothpaste and their assigned toothbrush.

- During a 3-day acclimation period, participants brushed their teeth with their assigned toothbrush twice daily for 2 minutes.
- For each of the 2 study visits, plaque levels were assessed before and after brushing with the assigned toothbrush under the supervision of the study staff.
- During the second crossover brushing period, participants were given their second assigned toothbrush for twice daily use during another 3-day acclimation period and returned to the clinical site for pre- and post-brushing plaque assessments again.

At the end of each study period, a questionnaire was administered to assess the acceptability of the sonic power toothbrush compared to the manual toothbrush.

Results:

Both toothbrushes significantly reduced plaque levels ($p < 0.001$) for whole mouth, proximal (between the teeth) and gumline tooth sites, compared to pre-brushing plaque levels. Compared to the manual toothbrush, BURST™ Pro Sonic Toothbrush removed significantly more plaque (whole mouth, proximal and gumline sites), $p < 0.001$.

- **Removed 24.% more whole mouth plaque.**
- **Removed more plaque from hard-to-reach areas:**
 - **Between the teeth: 16.7%.**
 - **Along the gumline: 48.7%.**
- **BURST™ Pro Sonic Toothbrush:**
 - **Provided 3.5x more whole mouth plaque reduction than the ADA Accepted manual toothbrush.**
 - **Removed 5.2x more plaque from between the teeth than the MTB.**
 - **Removed 3.1x greater plaque along the gumline than MTB.**
- **Based on the study questionnaire responses, participants who used the BURST SONIC TB:**
 - 100% agreed that “the toothbrush encourages two full minutes of brushing”.
 - 96.9% agreed that “This toothbrush gave me a professional cleaning (*clean feeling*) compared to 43.8% when using the manual TB”.
 - 90.6% agreed “this toothbrush’s on-screen timer helps me brush for two full minutes”.
 - 84.4% agreed that “the toothbrush’s features make brushing more effective compared to only 15.6% when the manual TB was used”.
 - 78.1% agreed that the BURST SONIC TB gave me a dentist-level clean feeling compared to 28% when using the manual TB.

Conclusions:

Plaque removal efficacy of the new BURST™ Pro Sonic toothbrush is similar to the levels of plaque removal achieved for the currently marketed BURST Sonic toothbrush that was established in two 30-day studies, conducted in accordance with ADA Acceptance Program Requirements for Toothbrushes. Results of these two studies were published as an abstract in the *Journal of Dental Research* (Santos S, et al. Plaque/Gingivitis Efficacy of a Sonic Toothbrush: Two Thirty-Day Independent Studies. J Dent Res Vol #9 (Spec Iss A):0119, (<https://iadr.abstractarchives.com/abstract/20iags-3324961/plaquegingivitis-efficacy-of-a-sonic-toothbrush-two-thirty-day-independent-studies>)).

The new BURST™ Pro Sonic Toothbrush has the **same** functional properties as the currently marketed **brush** with a few enhancements. The new product features have no adverse impact on the established efficacy of the BURST Sonic Toothbrush.

This study bridges the efficacy of the new BURST™ Pro Sonic Toothbrush to the currently marketed BURST™ Sonic toothbrush* and provides the same benefits **thereof**..:

- Removes up to 10X more plaque than a manual toothbrush.
- Reduces gum bleeding up to 3X greater than a manual toothbrush.
- Removes up to 6X more plaque from between the teeth and reduces more bleeding gums than a manual toothbrush.
- Up to 95% greater plaque removal in hard-to-reach areas.

* IN THE “WHITENING MODE”.